Reviewer's report

Title: Cancer and heart attack survivors' expectations of employment status: results from the English Longitudinal Study of Ageing

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Reviewer: Angelique De Rijk

Reviewer's report:

Review

'Cancer and heart attack survivors' expectations of employment status: results from the English Longitudinal Study of Aging' PUBH-D-16-03531

This study tested which determinants affected employment status after two years follow up in 1) a UK-sample of people working age who reported to have survived cancer at baseline in the previous 5 or 2 years and 2) a UK-sample of people of working age who reported to have experienced a heart attack at baseline in the previous 5 or 2 years. At baseline 46% of the cancer survivors was employed, and 41% of those who survived a heart attack. It is not mentioned what the employment status at 2-year follow-up was. Multiple regression analysis showed that employment status (not employed vs employed) at baseline being by far the most important determinant of employment status at follow-up in both groups, with ORs above 50. For the cancer survivors, general health and level of sports activities were additional significant predictors of work status at follow-up. For the heart attack survivors, gender and expectation of being at work after a certain age were additional predictors. It can be concluded that being employed after both cancer and heart attacks is largely dependent upon earlier work status in the UK, and that additional factors are diagnosis specific. Because of the design, it is difficult to interpret this as a sign that only those with employment also get employment support after cancer / heart attack, or that those who are already jobless due to the cancer/heart attack or not at baseline, will not easily find employment in the next two years in the UK.

General

Employment after a major diagnosis is an important topic. It is also important to compare different diagnosis, to be able to filter the diagnosis specific and general determinants. However, there are three major problems with the current study, which hampers drawing conclusions.

1) The design is invalid to test the determinants of employment status at follow-up. The sample is heterogeneous at baseline: the employment status varies. Thus when predicting employment status at follow-up, it is unclear whether one explains getting employment or loosing employment. It cannot be ruled out that these two developments have different
determinants. Including employment status at baseline as determinant does not correct this problem. It even worsens the power of the analysis of the possible effects of the other determinants by being extremely powerful. I recommend to split both samples at baseline in an employed subgroup and an unemployed subgroup, and test the determinants in both subgroups.

2) The data do not allow to study return to work. The data include employment status and sickness absence or disability pension status are not included. Thus, it cannot be studied whether persons return to work or not after sickness absence. With the current data not only work disability but also economical unemployment due to external factors is studied. In the manuscript, RTW and employment status are both used and confused. I recommend to only use employment status and be careful when comparing to RTW studies.

3) The theoretical framework is a behavioral, individual model. This is interesting, but the current findings do not support this model to a high extent. Moreover, employment status is not a solely individual choice but highly dependent on economical factors, labour market characteristics and policies (e.g. policies for supporting employment of work disabled persons). These characteristics might be country specific. I recommend to contextualize the study's objective by a short description of UK employment policy for cancer and heart attack survivors and to discuss the findings in the light of the UK policies and labour market characteristics. To what extent do factors other than personal factors play a role and to what extent will the findings be transferable to other countries?

Minor general comment:

4) Consider replacing 'heart attack' by 'myocardial infarction', a more common term in the literature. Explain that it is based on self-diagnosis.

Abstract

5) When the analyses are improved (see comment 1), the directions of the statistical effects can be mentioned in the results.

6) Regarding the conclusions: there is no similarity in factors, only one factor is found to be important but this is because of a flaw in the design.
7) Regarding conclusions: emphasize that these are results from the UK.

Background

8) Be careful with studies on RTW as the data used are not about RTW.

9) Be careful with theoretical notions on RTW as the data are about employment status.

10) Be careful to make firm statements on RTW after sickness absence in terms of an individual decision (lines 27-32), since the extent to which this is actually an individual decision varies per country (e.g. in the Netherlands, Norway and some areas in Canada, it is a team decision by law/policy) and in all countries, external factors will also affect this decision. Lines 1-5 on p. 5 suggest persons to possess resources and opportunities, but persons are also given / have access to resources or opportunities or not.

11) The UK context need to be addressed briefly (what employment support for employees with cancer/MI; what support for self-employed?: length of guaranteed employment after a medical condition)

Methods

12) Divide the groups in subgroups on the basis of their baseline work status.

Results

13) When the analyses are improved (see comment 1), the directions of the statistical effects can be mentioned in the results.

14) Describe employment status at follow up of both groups
Discussion

15) Regarding the conclusions: there is no similarity in factors, only one factor is found to be important but this is because of a flaw in the design.

16) Discuss the behavioral theoretical framework presented in the background in the light of the (new) results.

17) Discuss the measure for Expectations, it seems more a measure for sustainable employability than for expecting to get back to work after illness. Compare with studies which tested the ASE model on RTW and be clear about the differences.

18) Regarding difference between cancer and MI, there is a vast amount of empirical studies on depression in cardiac patients and worsened work and health outcomes (e.g. Shrey ea 2000, Kimble ea 2001, Kamphuis ea 2002, Soderman ea 2003, Steenland ea 2004, Earle ea 2006, Hemingway ea 2007, Slebus ea 2007, Schofield ea 2008). It does not seem relevant to refer to a study on heart failure and moreover, an effect of depression on work status is not equal to prevalence of depression. When the prevalence is low, the effect can still be enormous and vice versa (p. 16 lines 2-17).

19) There is also a large amount of studies on gender differences in cardiac conditions (Appelman etc) and their work outcomes (Mittag ea 2001, Kamphuis 2002 etc.).

20) Regarding conclusions: emphasize that these are results from the UK and discuss the specific problems with employment support among the groups studied and transferability of findings to other countries.

21) Regarding conclusions: in the current dataset employees and self-employed are mixed. Often, different outcomes are found for these groups. To what extent has this affected the results? To what extent is the expected part of self-employed in this dataset (relatively more self-employed in the UK compared to Europe, less compared to USA?) comparable with Europe / USA?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
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